

ANNEX 4

OECD's Guidelines for the Testing of Chemicals

Currently Available Guidelines, Draft Guidelines, and Guidance and Review Documents

(List Revised: May 1997)

I. ADOPTED GUIDELINES

Section 1 - Physical-Chemical Properties (blue pages)

Summary of Considerations in the Report from the OECD Expert Group on Physical Chemistry (1981)

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| 101 | UV-VIS Absorption Spectra
(Original Guideline, adopted 12th May 1981) |
| 102 | Melting Point/Melting Range
(Updated Guideline, adopted 27th July 1995) |
| 103 | Boiling Point
(Updated Guideline, adopted 27th July 1995) |
| 104 | Vapour Pressure
(Updated Guideline, adopted 27th July 1995) |
| 105 | Water Solubility
(Updated Guideline, adopted 27th July 1995) |
| 106 | Adsorption/Desorption
(Original Guideline, adopted 12th May 1981) |
| 107 | Partition Coefficient (n-octanol/water): Shake Flask Method
(Updated Guideline, adopted 27th July 1995) |
| 108 | Complex Formation Ability in Water
(Original Guideline, adopted 12th May 1981) |
| 109 | Density of Liquids and Solids
(Updated Guideline, adopted 27 July 1995) |
| 110 | Particle Size Distribution/Fibre Length and Diameter Distributions
(Original Guideline, adopted 12th May 1981) |
| 111 | Hydrolysis as a Function of pH
(Original Guideline, adopted 12th May 1981) |
| 112 | Dissociation Constants in Water
(Original Guideline, adopted 12th May 1981) |
| 113 | Screening Test for Thermal Stability and Stability in Air
(Original Guideline, adopted 12th May 1981) |
| 114 | Viscosity of Liquids
(Original Guideline, adopted 12th May 1981) |
| 115 | Surface Tension of Aqueous Solutions
(Updated Guideline, adopted 27th July 1995) |
| 116 | Fat Solubility of Solid and Liquid Substances
(Original Guideline, adopted 12th May 1981) |
| 117 | Partition Coefficient (n-octanol/water), HPLC Method
(Original Guideline, adopted 30th March 1989) |
| 118 | Determination of the Number-Average Molecular Weight and the Molecular Weight Distribution of Polymers using Gel Permeation Chromatography
(Original Guideline, adopted 14th June 1996) |
| 119 | Determination of the Low Molecular Weight Content of a Polymer Using Gel Permeation Chromatography
(Original Guideline, adopted 14th June 1996) |
| 120 | Solution/Extraction Behaviour of Polymers in Water
(Original Guideline, adopted 14th June 1996) |

Section 2 - Effects on Biotic Systems (green pages)

Summary of Considerations in the Report from the OECD Expert Group on Ecotoxicology (1981)

- 201 Alga, Growth Inhibition Test
(Updated Guideline, adopted 7th June 1984)
- 202 Daphnia sp. Acute Immobilisation Test and Reproduction Test
(Updated Guideline, adopted 4th April 1984)
- 203 Fish, Acute Toxicity Test
(Updated Guideline, adopted 17th July 1992)
- 204 Fish, Prolonged Toxicity Test: 14-Day Study
(Original Guideline, adopted 4th April 1984)
- 205 Avian Dietary Toxicity Test
(Original Guideline, adopted 4th April 1984)
- 206 Avian Reproduction Test
(Original Guideline, adopted 4th April 1984)
- 207 Earthworm, Acute Toxicity Tests
(Original Guideline, adopted 4th April 1984)
- 208 Terrestrial Plants, Growth Test
(Original Guideline, adopted 4th April 1984)
- 209 Activated Sludge, Respiration Inhibition Test
(Original Guideline, adopted 4th April 1984)
- 210 Fish, Early-Life Stage Toxicity Test
(Original Guideline, adopted 17th July 1992)

Section 3 - Degradation and Accumulation (yellow pages)

Summary of Considerations in the Report from the OECD Expert Group on Degradation/Accumulation (1981)

- 301 Ready Biodegradability
 - A: DOC Die-Away Test
 - B: CO₂ Evolution Test
 - C: Modified MITI Test (I)
 - D: Closed Bottle Test
 - E: Modified OECD Screening Test F: Manometric Respirometry Test
(Updated Guideline, adopted 17th July 1992)
- 302A Inherent Biodegradability: Modified SCAS Test
(Original Guideline, adopted 12th May 1981)
- 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test
(Updated Guideline, adopted 17th July 1992)
- 302C Inherent Biodegradability: Modified MITI Test (II)
(Original Guideline, adopted 12th May 1981)
- 303A A Simulation Test - Aerobic Sewage Treatment: Coupled Units Test
(Original Guideline, adopted 12th May 1981)

- 304A A Inherent Biodegradability in Soil
(Original Guideline, adopted 12th May 1981)
- 305 Bioconcentration: Flow-through Fish Test
(Updated Guideline, adopted 14th June 1996)
- 306 Biodegradability in Seawater
(Original Guideline, adopted 17th July 1992)

Section 4 - Health Effects (pink pages)

Summary of Considerations in the Report from the OECD Expert Groups on Short and Long Term Toxicology (1981)

- 401 Acute Oral Toxicity
(Updated Guideline, adopted 24th February 1987)
- 402 Acute Dermal Toxicity
(Updated Guideline, adopted 24th February 1987)
- 403 Acute Inhalation Toxicity
(Original Guideline, adopted 12th May 1981)
- 404 Acute Dermal Irritation/Corrosion
(Updated Guideline, adopted 17th July 1992)
- 405 Acute Eye Irritation/Corrosion
(Updated Guideline, adopted 24th February 1987)
- 406 Skin Sensitisation
(Updated Guideline, adopted 17th July 1992)
- 407 Repeated Dose 28-day Oral Toxicity Study in Rodents
(Updated Guideline, adopted 27th July 1995)
- 408 Subchronic Oral Toxicity - Rodent: 90-day Study
(Original Guideline, adopted 12th May 1981)
- 409 Subchronic Oral Toxicity - Non-Rodent: 90-day Study
(Original Guideline, adopted 12th May 1981)
- 410 Repeated Dose Dermal Toxicity: 21/28-day Study
(Original Guideline, adopted 12th May 1981)
- 411 Subchronic Dermal Toxicity: 90-day Study
(Original Guideline, adopted 12th May 1981)
- 412 Repeated Dose Inhalation Toxicity: 28-day or 14-day Study
(Original Guideline, adopted 12th May 1981)
- 413 Subchronic Inhalation Toxicity: 90-day Study
(Original Guideline, adopted 12th May 1981)
- 414 Teratogenicity
(Original Guideline, adopted 12th May 1981)
- 415 One-Generation Reproduction Toxicity Study
(Original Guideline, adopted 26th May 1983)
- 416 Two-Generation Reproduction Toxicity Study
(Original Guideline, adopted 26th May 1983)
- 417 Toxicokinetics
(Updated Guideline, adopted 4th April 1984)
- 418 Delayed Neurotoxicity of Organophosphorus Substances Following Acute Exposure
(Updated Guideline, adopted 27th July 1995)
- 419 Delayed Neurotoxicity of Organophosphorus Substances: 28-day Repeated Dose Study
(Updated Guideline, adopted 27th July 1995)
- 420 Acute Oral Toxicity - Fixed Dose Method
(Original Guideline, adopted 17th July 1992)
- 421 Reproduction/Developmental Toxicity Screening Test
(Original Guideline, adopted 27th July 1995)
- 422 Combined Repeated Dose Toxicity Study with the
Reproduction/Developmental Toxicity Screening Test
(Original Guideline, adopted 22nd March 1996)
- 423 Acute Oral toxicity - Acute Toxic Class Method
(Original Guideline, adopted 22nd March 1996)
- 451 Carcinogenicity Studies

- 452 (Original Guideline, adopted 12th May 1981)
Chronic Toxicity Studies
(Original Guideline, adopted 12th May 1981)
453 Combined Chronic Toxicity/Carcinogenicity Studies
(Original Guideline, adopted 12th May 1981)

Introduction to the OECD Guidelines on genetic toxicology testing and guidance on the selection and application of assays
(1986)

- 471 Genetic Toxicology: Salmonella typhimurium, Reverse Mutation Assay
(Original Guideline, adopted 26th May 1983)
472 Genetic Toxicology: Escherichia coli, Reverse Mutation Assay
(Original Guideline, adopted 26th May 1983)
473 Genetic Toxicology: In vitro Mammalian Cytogenetic Test
(Original Guideline, adopted 26th May 1983)
474 Genetic Toxicology: Micronucleus Test
(Original Guideline, adopted 26th May 1983)
475 Genetic Toxicology: In vivo Mammalian Bone Marrow Cytogenetic Test - Chromosomal Analysis
(Updated Guideline, adopted 4th April 1984)
476 Genetic Toxicology: In vitro Mammalian Cell Gene Mutation Tests
(Updated Guideline, adopted 4th April 1984)
477 Genetic Toxicology: Sex-Linked Recessive Lethal Test in Drosophila melanogaster
(Updated Guideline, adopted 4th April 1984)
478 Genetic Toxicology: Rodent Dominant Lethal Test
(Updated Guideline, adopted 4th April 1984)
479 Genetic Toxicology: In vitro Sister Chromatid Exchange Assay in Mammalian Cells
(Original Guideline, adopted 23rd October 1986)
480 Genetic Toxicology: Saccharomyces cerevisiae, Gene Mutation Assay
(Original Guideline, adopted 23rd October 1986)
481 Genetic Toxicology: Saccharomyces cerevisiae, Mitotic Recombination Assay
(Original Guideline, adopted 23rd October 1986)
482 Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells in vitro
(Original Guideline, adopted 23rd October 1986)
483 Genetic Toxicology: Mammalian Germ Cell Cytogenetic Assay
(Original Guideline, adopted 23rd October 1986)
484 Genetic Toxicology: Mouse Spot Test
(Original Guideline, adopted 23rd October 1986)
485 Genetic Toxicology: Mouse Heritable Translocation Assay
(Original Guideline, adopted 23rd October 1986)

II. GUIDANCE AND REVIEW DOCUMENTS
(OECD Monograph Series on Testing and Assessment)

- 1 Guidance Document for the Development of OECD Guidelines for Testing of Chemicals
(Environment Monograph No. 76, Published December 1993; Reprinted June 1995)
- 2 Detailed Review Paper on Biodegradability Testing
(Environment Monograph No. 98, Published June 1995)
- 3 Guidance Document for Aquatic Effects Assessment
(Environment Monograph No. 92, Published 1995)
- 4 Report of the OECD Workshop on Environmental Hazard/Risk Assessment
(Environment Monograph No. 105, Published 1995)
- 5 Report of the SETAC/OECD Workshop on Avian Toxicity Testing (Published December 1996)
- 6 Report of the Final Ring Test of the Daphnia magna Reproduction Test
(Published February 1997)
- 7 Direct Phototransformation of Chemicals in Water (Published February 1997)

III. DRAFT GUIDELINES

Section 1 - Physical-Chemical Properties

- 106 Adsorption/Desorption
(Draft Updated Guideline, January 1997)
- *** Screening Method for the Determination of the Adsorption Coefficient on Soil (Koc) using High Performance
Liquid Chromatography (HPLC)
(Draft New Guideline, April 1994)

Section 2 - Effects on Biotic Systems

- 205 Avian Dietary Toxicity Test
(Draft Updated Guideline, in preparation)
- 206 Avian Reproduction Test
(Draft Updated Guideline, in preparation)
- 211 Daphnia magna Reproduction Test
(Draft New Guideline, April 1997)
- 212 Fish, Toxicity Test on Egg and Sac-Fry Stages
(Draft New Guideline, April 1997)
- 213 Honeybees, Acute Oral Toxicity Test
(Draft New Guideline, April 1997)
- 214 Honeybees, Acute Contact Toxicity Test
(Draft New Guideline, April 1997)
- *** Fish, Juvenile Growth Test - 28 Days
(Draft New Guideline, November 1994)
- *** Avian Acute Toxicity Test - Oral Toxicity
(Draft New Guideline, in preparation)
- *** Soil Microorganisms, Nitrogen Mineralisation Test
(Draft New Guideline, June 1996)
- *** Soil Microorganisms, Carbon Mineralisation Test
(Draft New Guideline, June 1996)

Section 3 - Degradation and Accumulation

- 303 Simulation Test - Aerobic Sewage Treatment
(Draft Updated Guideline, September 1996)
303A: Activated Sludge Units
303B: Treatability of Chemicals: Prediction of Concentration in Activated Sludges and Assessment of Kinetic Constants
303C: Biofilms
- *** Performance of Out-door Lysimeter Studies
(Draft New Guideline, November 1996)

Section 4 - Health Effects

- 403 Acute Inhalation Toxicity
(Draft Updated Guideline, August 1996)
- 408 Repeated Dose 90-Day Oral Toxicity Study in Rodents
(Draft Updated Guideline, April 1997)
- 409 Repeated Dose 90-Day Oral Toxicity Study in Non-Rodents
(Draft Updated Guideline, April 1997)
- 414 Prenatal Developmental Toxicity Study
(Draft Updated Guideline, June 1996)
- 416 Two-Generation Reproduction Toxicity Study
(Draft Updated Guideline, April 1996)
- 424 Neurotoxicity
(Draft New Guideline, February 1997)
- 425 Acute Oral Toxicity: Up-and-Down Procedure
(Draft New Guideline, April 1997)
- 471/472 Reverse Mutation Assay using Bacteria
(Draft Updated Guideline, February 1997)
- 473 In vitro Mammalian Chromosomal Aberration Test
(Draft Updated Guideline, February 1997)
- 474 Mammalian Erythrocyte Micronucleus Test
(Draft Updated Guideline, February 1997)
- 475 Mammalian Bone Marrow Chromosomal Aberration Test
(Draft Updated Guideline, February 1997)
- 476 In vitro Mammalian Cell Gene Mutation Test
(Draft Updated Guideline, February 1997)
- 483 Mammalian Germ-cell Chromosomal Aberration Test
(Draft Updated Guideline, February 1997)
- 486 Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo
(Draft New Guideline, February 1997)
- *** Somatic Mutation and Recombination Tests (SMART) in *Drosophila melanogaster*
(Draft New Guideline, May 1994)
- *** Percutaneous Absorption: in vitro Method
(Draft New Guideline, May 1996)
- *** Percutaneous Absorption: in vivo Method
(Draft New Guideline, June 1996)
- *** Acute Dermal Photoirritation Screening Test
(Draft New Guideline, February 1995)
- *** Acute Dermal Photoirritation Dose-Response Test
(Draft New Guideline, February 1995)

- *** In Vitro Syrian Hamster Embryo (SHE) Cell Transformation Assay
(Draft New Guideline, March 1996)
- *** Acute Dermal Irritation Study in Human Volunteers
(Draft New Guideline, April 1997)

IV. DRAFT GUIDANCE AND REVIEW DOCUMENTS **(OECD Monograph Series on Testing and Assessment)**

- **** Guidance Document for the Conduct of Studies of Occupational Exposure to Pesticides During Agricultural Application
(Submitted for derestriction, March 1997)
- **** Guidance for Acceptance/Palatability Tests in Birds
(In preparation)
- **** Aquatic Testing Methods for Pesticides and Industrial Chemicals
(Circulated for comment, December 1995)
- **** Freshwater Lentic Field Tests
(Circulated for comment, July 1996)
- **** Draft Detailed Review Paper: Appraisal of Test Methods for Sex Hormone Disrupting Chemicals
(Circulated for comment, March 1997)